

REMARKS

Applicants request reconsideration of the present application in view of the foregoing amendments and the following remarks.

I. Introduction

Claims 1-24 are pending in the application. Claim 1 have been amended to define the claimed invention more clearly and distinctly from the prior art. Claims 23 and 24 have been added to recite additional feature of the claimed device. Support of these amendment of claims can be found throughout the specification, for example, at page 3, lines 11-23. Entry of the amendment is respectfully requested.

II. Rejection under 35 USC § 103

The examiner has maintained the previous rejection of claims 1-17 and has also rejected new claims 19-21 as obvious over EP 648,529 to Fusejima et al. ("Fusejima I".) In addition, the examiner has rejected claims 18 and 22 as obvious over Fusejima I and U.S. Patent No. 5,939,097 to Fusejima et al. ("Fusejima II"). Applicants respectfully traverse these rejections.

At the outset, applicants note that claim 1 has been amended to recite the feature of the peripheral apertures in the claimed devise, which applicants relied on the previous response, *i.e.*, allowing gas to pass through granules, considering the examiner's concerns expressed in page 4, second paragraph of Office Action.

The examiner discredits the applicant's argument that "Fusejima I provide no hint that peripheral surfaces of the frame members can either form a cylindrical portion or provide a path for allowing gas to pass through granules." Then, the examiner asserts that "Fusejima I does teach the gas flow through the gas supply duct (31) from the outside to the inside of the rotary drum or from the inside to the outside of the drum."

However, the examiner apparently neglects the fact that Fusejima I fails to teach or suggest that either frame members (51a) and (52a) or a plurality of partition plates (52), both of which are provided at the outside of the cylindrical portion (2), can participate in communication between the inside and outside of the cylindrical portion,

i.e., provide a path for allowing gas to pass through granules. Rather Fusejima I clearly states that a multiplicity of vent holes (16) formed in the cylindrical portion (2) of the rotary drum (1) plays a role for communicating between inside and outside, *i.e.*, communicating a coating chamber (15) with the outside of the cylindrical portion (2) in a region indicated by reference character L in the central portion in Figure 2. Fusejima I further describes that each of the vent holes (16) is intended for passing the drying gas, and has an inner diameter smaller than that of the granular material (17). See col. 5, line 53 to col. 6, line 4. Furthermore, with respect to additional embodiments depicted in figures 3 and 4, Fusejima I emphasizes the need of vent holes (6) by stating that "only if the vent holes (16) are formed, various sectional shapes such as an ellipse other than the hexagon and octagon may be adopted." Thus, one of ordinary skill in the art would infer from this teaching that any embodiments for a cylindrical portion in Fusejima I need vent holes as a path for allowing gas to pass through granules, regardless of the presence of frame members or partition plates. Therefore, Fusejima I evidences no motivation for one of ordinary skill in the art to modify frame members or partition plates to provide a path for flowing gas between inside and outside of the cylindrical portion, instead of using vent holes.

The examiner also contends that the use of the particular parallel section (22) has not been shown to provide any unusual and/or unexpected results since Fusejima I obtains the same results desired by applicants, *i.e.*, a granular coating apparatus for tablets, granules and the like useful for pharmaceuticals and food products. Applicants respectfully submit that the examiner misunderstands differences in the coating devices of Fusejima I and the instant application.

As explained in col. 3, lines 41-44 of Fusejima I, the object of Fusejima I is to provide a coating device for (1) an easy direction change of a drying gas and for (2) easy cleaning. To achieve this purpose, Fusejima I adopts an arrangement of the coating device wherein the annular duct formed by a gas supply duct and an exhaust duct also comprises separation members. At a first position, separation members guide a drying gas flow from the inside to the outside of the rotary drum through accumulated layer and, at a second position, from the outside to the inside of the rotary drum through the accumulated layer. The separation members may be composed of gas

supply-exhaust changeover dampers, which are changeable between the first position and the second position. See col. 4, lines 2-16. Adopting such separation members can easily perform the direction change of supply of the drying gas. See col. 4, lines 35-40. Further, the annular duct is adapted to contain the cleaning solution and the rotary drum is rotated in a state where the cleaning solution is contained, so that the rotary drum can be easily cleaned. See col. 4, lines 21-24.

The claimed coating device was developed to overcome the drawbacks in producing granules, mini- or microgranules, in particular, using existing coating devices. The drawbacks include difficulty in manufacturing the device, a significant pressure drop in an air circuit by a small diameter of apertures, escape of microgranules which causes contamination of an air circuit, and difficulty of cleaning.

In contrast to Fusejima I, the inventors of the claimed invention use parallel sections to provide a plurality of peripheral apertures, thereby overcoming the shortcomings of the existing coating devices. More specifically, because the width of the apertures depends on the spacing chosen for the sections, spacing can be very small so as to obtain very narrow apertures suitable for the production of microgranules with a diameter between 0.4 and 1.5 mm, which is easy to manufacture. Moreover, the percentage of gaps in the wall of the drum is high, such that the pressure drop while circulating air crosses the drum is reduced. Since the sections make the wall of the drum very strong, any risk of escaping the granules into the installation is avoided. In addition, the sections are very easy to clean, in particular from the outside of the drum, thus reducing the risks of cross-contamination when fixing two different products successively. See page 3 of the specification.

Although the claimed coating device also provides a feature of easy cleaning, means for achieving the purpose is completely different between the claimed invention and Fusejima I. That is, in the claimed invention, it results from the use of mutually parallel sections defining apertures, rather than adapting the annular duct to contain the cleaning solution and rotating the rotary drum in a state where the cleaning solution is contained, as illustrated in Fusejima I. Thus, the claimed coating device provides significant advantages over the existing coating device by using mutually parallel sections that define the apertures, which is not disclosed or suggested in Fusejima I.

Therefore, one of ordinary skill in the art would not have been motivated to modify the frame members or partition plates to arrive at the claimed invention, with reasonable expectation of success.

Accordingly, there is no *prima facie* case of obviousness, and thus applicants respectfully request withdrawal of the rejection.

With respect to the rejection of claims 18 and 22, because Fusejima I is not relevant as a primary reference for obviousness rejection, as explained above, applicants request that this rejection also be withdrawn.

In view of the above amendments and remarks, favorable reconsideration and allowance of the application are respectfully requested. In the event that any issues remain, the Examiner is invited to telephone the undersigned with any proposal to expedite prosecution.

Respectfully submitted,

Date

Feb. 15, 2002

By

Stephen B. Maebius

FOLEY & LARDNER
Washington Harbour
3000 K Street, N.W., Suite 500
Washington, D.C. 20007-5109
Telephone: (202) 672-5569
Facsimile: (202) 672-5399

Stephen B. Maebius
Attorney for Applicant
Registration No. 35,264

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Marked up rewritten claims:

1. (Twice Amended) Device for producing granules comprising a drum with peripheral apertures and a member for feeding the drum with coating or fixing substance, wherein the drum comprises mutually parallel sections which define between them the apertures[.] and which form a path between the inside and outside of a cylindrical portion of the drum for flowing gas.